characterized by tumefaction and pain of the hepatic region and the general signs of latent suppuration; rarely, by tumours more or less marked or fluctuating. The diagnosis will scarcely be made except by exclusion. (3) Whatever may be the origin, the depth, or the extent of these peri-splenic collections, they are not above the resources of modern surgery. It is this practical point of view which will dominate the question. No effort should be spared in order to determine the existence, and then the nature, of the abscess; and exploratory punctures, either deep or multiple, should not be too much feared. Made methodically and prudently, such explorations bring only an insignificant danger, as the recent literature of hepatic abscess abundantly shows; they alone may be, on the contrary, the point of departure of a truly rational and useful therapeutic method.—*Practitioner*, February, 1883.

SURGERY.

Neurectomy of Inferior Dental.

Dr. SONNENBERG, of Berlin, has instituted a new operation for the excision of a portion of the inferior dental nerve, which he describes in the *Berliner Klinische Wochenschrift* for October 16th. It will be remembered that the nerve in question enters its bony canal on the inner surface of the ramus of the lower jaw, under cover of the internal lateral ligament. Dr. Sonnenberg found in the dead subject that, having the head held strongly backwards, it was possible to reach the inferior dental nerve by a neat incision, which was begun one centimetre and a half in front of the angle of the jaw, and continued along the (in this position) ascending border of the body of the lower jaw for three to four centimetres, as far as the facial artery—an incision which corresponds roughly to the insertion of the masseter muscle. We may say that two centimetres and a half is an inch, as nearly as may be. This being done, the inner surface of the lower jaw-bone must next be cleaned up to the internal lateral ligament, which usually lies about two centimetres and a half from the angle of the jaw; the insertion of the internal pterygoideus must be separated from the bone; the ligament and nerve may now be felt, and with good light the latter can be seen in the bottom of the crateriform wound. Next a strong blunt-pointed hook must be conducted by the finger up to the ligament, and then somewhat upwards along the ascending ramus of the jaw, and at the same time inwards in the direction of the buccal mucous membrane. In this fashion the nerve is hooked up without touching the neighbouring artery, which lies very close to the bone. The lingual nerve is quite to the inner side, and is not meddled with. The inferior dental so secured is very extensible, and can be drawn down towards the angle of the jaw, and a portion easily cut therefrom. The other methods (done either from the mouth, or by trepanning the lower jaw from the outside) are nothing like so good as this new operation, according to the author.

The advantages are enumerated: (1) The wound is the smallest possible; (2) the operation is done comfortably, provided the formal retraction of the head is thoroughly observed; (3) the bleeding is insignificant; (4) the capsule of the submaxillary gland is left intact, and so no burrowing of pus can take place there; (5) the nerve is easily found and brought forward alone; (6) a good piece can be excised, because the nerve can be drawn out so easily; (7) the wound is favourably situate for healing; (8) the scar is small, and in an unobjectionable place.

Dr. Sonnenberg has operated on the living subject three times for neuralgia. with eminent success both as regards operation and relief from pain. Von Langenbeck has used this method of operating once; but the nerve was only strongly stretched, not excised. The relief from neuralgia seems to have been equally great.—*Med. Times and Gazette*, Dec. 9, 1882.

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Complete Luxation of the entire Arytenoid Cartilage.

Chvostek reports a case of typhus in which the fever took on a pyæmic character. The patient was awakened suddenly in the night by extreme dyspnœa, and soon became unconscious. The respirations were very deep, and occurred every ten or fifteen seconds, and inspiration was accompanied by a harsh laryngeal sound, while the larynx descended low in the neck, and there was great depression of the epigastrium, intercostal spaces, and supra-clavicular fossæ at each inspiration. Expiration was nearly normal and noiseless, swallowing was impossible, the pharynx insensible, and reflex absent. Tracheotomy was at once performed, but failed to save the patient.

At the autopsy, the entire left arytenoid cartilage was found lying nearly loose in the rhima glottidis, only being bound by a slender thread of tissue to its former seat. The posterior half of the true and false vocal cords on the left side were also implicated by ulceration in the displacement. There was œdema of the right ary-epiglottic fold.—*Centrlb. f. d. Med. Wissen.*, Dec. 30, 1882.

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Sarcoma of the Tonsil Cured by Iodoform Injections.

At a recent meeting of the Imperial Society of Physicians, in Vienna, Prof. Weinlechner presented a patient who had been cured of a sarcoma of the tonsil, with contemporaneous glandular enlargement in the neck, by iodoform injections at the hands of Dr. Schum. There were present Professors Billroth and Albert, both of whom had seen the patient and declined to operate upon him. The history of the patient was as follows: He first noticed his disease in March, 1881, and consulted Billroth, who pronounced the case hopeless and unfit for operation. He then went to Albert, who at first agreed to operate, but after a more careful examination refused. In June he went to Weinlechner, who found in the region of the left tonsil a tumour about the size of a lemon, much fissured and ulcerated, and a glandular swelling as large as an orange, deep in the neck, below the angle of the left jaw. Weinlechner agreed to operate, stating that it would be necessary to resect the jaw also, that even then he could not guarantee a radical extirpation, and that a speedy recurrence was not improbable. This outlook deterred the patient from submitting to an operation. Weinlechner then advised him to submit to iodoform injections (1 part to 10 of ether) by Dr. Schum.

Sixteen injections were made in the inner tumour and fourteen in the neck, each consisting of 2½ to 3 drops. In the beginning of August, after the sixth injection in each place, the glandular swelling was almost gone, and the tonsillar tumour decidedly smaller. In anticipation of a favourable and therefore interesting issue, the tumour was examined by Prof. Chiari, and pronounced a spindle-celled sarcoma. Now, however, occurred an unpleasant interruption. In the beginning of December the remains of the tumour in the fauces emitted an offensive odour, and in the night of December 14th four hemorrhages took place. As the hemorrhages amounted to about half a litre (a pint), Weinlechner, aided by Schum, ligatured the left common carotid artery. Silk was used for the ligature, and the ends were cut off short. A fistulous track remained, from which two months later a hemorrhage occurred, which was checked with tampons of styptic cotton. The fistula remained open, in all, six months. During this time the patient had severe gastric catarrh—perhaps caused by absorption of iodoform—and a bronchial catarrh, and presented so melancholy a spectacle that metastasis was suspected. The use of iodoform was now discontinued, and the patient's appetite increased and his appearance improved. Under the diligent use of gargles of permanganate and chlorate of potash, the tumour in the fauces steadily diminished, and in its place there could be felt a comb-like elevation on the left wall of the fauces, extending downwards to the space between the pharynx and the tongue. This ridge-like elevation had disappeared in August, 1882, and now nothing can be felt of the tonsillar or glandular tumour, and only a delicate scar in the tonsillar region and on the palato-glossal arch indicates the former position of the new formation.—*Allgem. Weiner Med. Zeitung*, Oct. 24, 1882, p. 466.

This is a most remarkable case, and hard to be believed. Yet that the tumour was actually a sarcoma can hardly be doubted in view of the opinion of so many distinguished surgeons, and the examination by Prof. Chiari. But, admitting this much, the query arises, how much good was done by the iodoform beyond causing a large slough? and what part of the cure ought to be attributed to the ligature of the carotid artery?

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Successful Resection of the Pylorus for Gastric Ulcer.

DR. L. TH. VAN KLEEP, of Maastricht, has recently performed, with entirely successful results, the first case of resection of the pylorus done in Holland. The case was one of an unmarried woman, 37 years of age, who had for fifteen years suffered from a disease of the stomach, which for the last five years had been recognized as a gastric ulcer. The operation of resection was performed under strict antiseptic precautions. The abdomen was opened by an oblique incision, starting about three centimetres to the right of the linea alba, and three fingers' breadth above the navel, and extending to about six centimetres to the left of the linea alba. The greater and lesser omenta were ligated and divided, and the pylorus and duodenum drawn out of the wound, and the peritoneal cavity protected from entrance of foreign matter by a compress of antiseptic gauze. Rydygier's compresses were applied to the stomach and duodenum. The stomach was divided with the scissors between the clamps and the pylorus, and its mucous membrane divided so near the pyloric contraction that the opening into the cavity of the stomach was so small that only one finger could be inserted; this opening was subsequently sufficiently enlarged to make it fit the opening into the duodenum. The stomach and duodenum were united by five deep and five superficial Lembert's stitches, while the posterior edges were united by Wölfler's sutures, and the anterior by means of Czerny's sutures. The abdominal wound was closed and covered with a Lister's dressing. The excised portion measured four and a half by five centimetres, and was so contracted that a quill could be barely passed. On one side was situated an ulcer one centimetre in diameter and one millimetre in depth; no trace of carcinoma could be detected. The patient received a number of subcutaneous injections of ether, and for the first two days enemata of wine and milk and swallowed pieces of ice; there was no fever observed at any time, or any trace of peritonitis; on the third day she swallowed small quantities of fluid food; in six days the abdominal wound was completely healed, and in ten days she ate a beef-steak. In four months after the operation she had gained twenty-four pounds in weight.—*Deutsch. Med. Woch.*, Dec. 23, 1882

Volvulus of the Ileum treated by Abdominal Section.

At the meeting of the Medical Society of London, Dr. J. K. Fowler read the notes of a case of intestinal obstruction in which abdominal section was performed by Mr. Hulke, and volvulus of the ileum found and untwisted. The patient was much relieved by the operation, and the bowels were opened freely three times subsequently. Death took place three days afterwards from cardiac failure and hypostatic pneumonia. At the post-mortem examination a portion of the ileum with a long mesentery was found somewhat congested, the peritoneum generally was normal and the wound healthy.

Special stress was laid upon the advisability of operating early in cases of internal strangulation of the small intestine, and attention was directed to the following mode of proceeding, at the author's suggestion, after the abdomen had been opened. The finger was passed deeply down into the pelvis, where a portion of collapsed small intestine was found; this was withdrawn and carefully followed until the obstruction was reached. It was laid down as an absolute rule that in the operation of laparotomy the distended bowel should only be manipulated in case the surgeon after a careful search had failed to find the collapsed intestine.

The following advantages were claimed for this method of operation: (1) That the collapsed bowel can be examined with far greater ease and in much less time than an equal length of distended intestine; (2) that a considerable length may, if necessary, be exposed at one time, without any difficulty arising, when it is desired to return it into the abdomen; (3) that the collapsed intestine never leads to the duodenum—a matter of some importance; (4) that the danger from peritonitis from exposure of contracted bowel is very slight; and (5) that rupture during its manipulation is practically impossible.

It was suggested for the following reasons that in all cases of obstruction of the small intestine the contracted portion would be found, as in this case, lying in the pelvis: (1) The tympanitic abdomen shows that distended bowel is on the surface, as would be expected from its diminished specific weight; (2) that in making autopsies the author had noticed that if the upper portion of the small intestine be distended, the contracted lower end is always seen lying behind the distended portion, low down in the pelvis. The explanation offered was that during the violent and continued peristalsis, and gradual distension of the bowel above the obstruction, the smaller and less active portion of bowel below is forced into the pelvis, which is, besides, too small to hold a distended loop. Two cases were mentioned which had lately been operated on at the Middlesex Hospital, in which at the autopsy a second band had been found close to one divided during the operation; the result had not in either case been influenced by these bands having escaped notice.—*Lancet*, Feb. 3, 1883.

Extirpation of a Displaced Kidney.

On Nov. 3d last Dr. William M. Polk extirpated the kidney of an unmarried woman, aged 19, who sought relief from severe pain and distress in the left iliac fossa. Examination showed the absence of the vagina, and neither uterus nor ovaries were to be found in the true pelvis. In the left iliac region, deep in the fossa, was a tumour, freely movable in all directions. It could be pushed as low as Poupart's ligament, as far outward as the anterior superior spine of the ilium, far enough inward to bring its inner border to the centre of the pelvic inlet, and far enough upward to bring its upper border a finger's breadth above the posterior border of the crest of the ilium. It was of oval form, its greatest length being from above downward and inward, its lower extremity apparently smaller than the upper. Running from this lower extremity downward into the pelvis, apparently toward the posterior surface of the bladder, was a thin cord-like strip of tissue. This tumour coincided with the region of pain.

Carefully weighing all the reasons for and against, it seemed plain that he had to deal with a displaced kidney, but one that was intimately associated with menstruation—so intimately as to make it probable that there was a close relation between the organ and the ovary. The fact that all the menstrual symptoms pointed to the left iliac region and none to the right, that no enlargement or tenderness during menstruation could be detected in the right iliac region, suggested the idea that all the organs appertaining to that function present in the case were in the left side. The line of thickened tissue that seemed to extend from the inner edge of the tumour down into the pelvis between the rectum and bladder, together with the extreme nature of the symptoms, gave weight to this view. This point being decided, the next question was as to the measure of relief proper in the case.

It was evident that it was not a dislocated kidney, but one congenitally displaced, for it could not be pushed from the iliac fossa. No apparatus nor operation looking to fixing the kidney in the lumbar region could therefore be entertained. In fact, the element of mobility held but a subordinate position in the matter of distress.

The question was thus narrowed to removal on the one hand, or bearing with the suffering on the other.

In view of the dangers of removal, the patient, at our suggestion, concluded to endure her distress as best she could, and left the hospital.

In a few days she returned, and said she had tried to work, but could not, and that, after consulting with her friends, she had concluded to submit to the operation.

Several cases had been reported in which, death occurring after extirpation, it was found that the remaining kidney was so far diseased as to be useless. There seemed no chance of this mishap here, as there was not, nor had there been at any time, evidence of kidney disease. During the menstrual disturbance there had been traces of albumen in the urine, but never casts nor renal epithelium, and in the intervals the urine was characteristically healthy. The final question was as to the absence of a kidney.

In view of the genital malformation, there was a possibility of but one kidney being present, but how to determine this was by no means easy.

The patient was placed in the knee-chest position, and careful percussion of the renal regions was made, the result being that there was dulness on the right side, and deep tympanitic resonance on the left; the bimanual palpation of the lumbo-abdominal regions, owing to the tension and thickness of the abdominal walls, was negative. The method of Simon was now open (catheterization of the ureters), but the fact that, in common with many others here, he had tried this method several times, and had never succeeded (save when a large vesico-vaginal fistula existed), made him feel the attempt would be futile.

The method of examining the renal region by means of the hand in the rectum was discarded, for the reason that the pelvis was too small to permit of it without serious risk to the patient; it had been attempted while trying to determine the position of the uterus and ovaries.

The remaining method was the examination of the kidneys *in situ* after opening the abdominal cavity.

In planning the operation, his intention was to open the abdominal cavity in the median line as in ovariotomy, but, just before the day appointed, he saw a case of extirpation of the kidney in consultation, in which, after the operation, owing apparently to the action of the ligatures, dangerous obstruction of the bowels had supervened. This caused him to reconsider his operation. Referring now to the position of the tumour in his case, it will be remembered that it was situated in the iliac fossa, and that it could be easily pushed down as low as Poupart's ligament; it was evidently closely attached to the fossa, as was shown by the fact that with the patient in the knee-chest position it did not fall forward toward the abdominal wall; it was probably behind the peritoneum under the sigmoid flexure. Evidently it could be removed by an incision just above Poupart's ligament. If its position was as he supposed, he should not have to open the peritoneal cavity. He could secure free drainage from the end of the ureter and the vessels, along a short tract downward, with no possibility of coming in conflict with an important organ. These considerations prevailed, and he decided in favour of the incision just above Poupart's ligament.

The patient being etherized, an incision was made parallel to Poupart's ligament, about an inch from it; its upper limit was on a level with the anterior superior spinous process of the ilium, its lower just outside the internal inguinal ring. The subperitoneal space in the iliac fossa was speedily reached. Pressure from above brought the kidney into the opening; an incision was made into a dense layer of connective tissue surrounding it, and at once the organ came into view. It was easily enucleated, and removed. Two ligatures were used, one for the ureter and one for the artery and vein. No blood was lost. It was evident that he had not entered the peritoneal cavity; but, before he could close the wound, the patient showed signs of heart-failure. This, however, passed off under stimulation. The wound was closed to within half an inch of the lower angle, through which the ligature of the pedicle was brought out, and a piece of doubled drainage tube introduced. The principles of Listerism were carried out during the entire operation. It lasted twenty-five minutes. Death occurred under symptoms of uræmic poisoning eleven days afterwards.

On post-mortem examination both kidneys were found to be absent. There was no trace whatever either of the right kidney or of the right ureter. The left kidney was removed during life. It did not occupy its normal position, but lay in a space in front of the iliacus muscle behind and to the side of the peritoneum. This space which contained the kidney extends from a little above the crest of the ilium to the brim of the true pelvis. The vagina and uterus were absent. Two large and healthy ovaries were present in normal situation.

The kidney removed, with the exception of increase in size, appeared to be normal.

Dr. Polk offers the following suggestion as to a method of procedure for establishing the presence of two kidneys: Take a large catheter, made of some substance like block tin, bend it to the shape of a Sims's sigmoid catheter; let the curve that passes into the bladder be as decided as it can be made, and yet not so great as to interfere with the ready passage of the instrument into the bladder. Suppose it to be the right ureter you desire to close. Introduce the instrument; then place the patient in the lithotomy position. Now carry two fingers as far into the rectum as possible.[1] Now place the catheter so that its curve in the bladder hugs the right pelvic wall; the end of the curve will pass directly across the line of the right ureter. Now press the fingers against the catheter, and the ureter will be sufficiently occluded to prevent all escape of urine. By means of the catheter in position (it may be double), the bladder can be thoroughly cleansed and emptied. As fresh urine flows in from the other ureter, it can be withdrawn and tested. As urine from a sound kidney is secreted at about the rate of a minim in four or five seconds, it will not require long-continued pressure to secure the amount of urine necessary for satisfactory examination. In the female the procedure is more certain of accomplishment than in the male, because we can, in a measure, fix the base of the bladder by traction upon the anterior vaginal wall by means of a tenaculum hooked into it just below the cervix, or, better, well to the right of the cervix, on the lateral wall, the traction being downward and to the patient's left.

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[1] An instrument curved and grooved to receive the catheter might be substituted for the fingers for counter-pressure.

The fact that a patient can live, and be in fair condition, eleven days without any kidney tissue, in Dr. Polk's opinion, would seem to prove that, if we can demonstrate the presence of a sound kidney, the removal of its diseased fellow (the disease reacting unfavourably on health and life) is not only permissible, but imperative.—*N. Y. Med. Journ.*, Feb. 17, 1883.

Fixation of Wandering Kidney.

Dr. ROBERT F. WEIR reports (*New York Medical Journal*, Feb. 17, 1883) a case of wandering kidney in a woman aged 33 years, in which, under antiseptic precautions, he cut along the border of the quadratus lumborum muscle, not going too close to the twelfth rib, to avoid the pleura, as Holl directs, and divided all the tissues down to the mass of fat which surrounds the kidney, and then stitched this to the edges of the wound, and so secured the kidney in a permanent position. He then left the wound open and let it fill up with granulations, and finally cicatricial tissue formed in sufficient quantities to close the opening and support the kidney. The patient did well, and is now in a much improved condition.

E. BASSINI reports (*Annali Univ. di Méd. e Chir.*, Sept. 1882) the case of a woman aged 27 years, in whom, without any history of injury, the right kidney had become displaced. The organ was easily reached by a lumbar incision when pressure was made in the abdominal surface and stitched by four catgut sutures to the edges of the wound. A complete cure, with entire removal of all symptoms, occurred within twenty days.—*Centrlb. f. Chirg.*, Jan. 27, 1883.

Nephrectomy for Chronic Pyelitis with Large Phosphatic Renal Calculus.

Dr. J. WILLISTON WRIGHT reports (*New York Med. Journal*, Feb. 17, 1883) the case of a woman, aged 34, who had suffered from constant dull pain in the right lumbar region for nine years. Upon examination a tumour was recognized by the touch in the right loin. It was as large as the fist, very hard, quite movable, and very sensible to pressure. At about the centre of its inner margin there was felt a nodulated mass, about the size of an English walnut, which was much harder than the remainder of the tumour, and which was much more sensitive, the patient complaining of nausea and great pain when it was handled, and especially when it was compressed between the fingers.

Believing the tumour to be the displaced kidney, and the nodulated mass a stone in its pelvis, Dr. Wright made use of the aspirator needle, passing it through the tumour both from the lumbar region and from the loin in various directions, but without being able to encounter the calculus, probably from his great care in avoiding the large vessels in its neighbourhood, as at the former attempt.

He now advised the removal of the whole kidney.

On October 14th, 1882, Dr. Wright extirpated the right kidney through an incision six inches in length, made along the border of the rectus muscle on the

III. The third operation was done upon a man 69 years old, in good general condition, with no kidney disease and little cystitis. An attempt at lithotrity having failed, eleven days later, March 8, 1882, suprapubic lithotomy was carried out. Two stones were easily removed. Antiseptic precautions were used, and a Lister dressing applied after inserting a siphon tube in the bladder. No catheter was placed in the urethra. The siphon apparatus did not work perfectly, and was replaced with two simple unfenestrated tubes ("*en flûte de Pan*") introduced into the bladder, and carried over the pubes to a urinal between the thighs. After this the Lister dressing could be used to the end of the treatment. On the eleventh day the tubes were removed, and a catheter placed permanently in the urethra. The patient's wound was completely cicatrized the fifty-first day. Of the stones, one weighed 55 grammes (nearly 2 oz.), and measured 5 x 4 x 2 centimetres. The other weighed 53 grammes (about 2 oz.), and was almost exactly the same size as the first.

IV. The fourth operation was done on a man 57 years old, in bad condition, and in whom lithotrity had failed ten days before. The operation was done May 4, 1882. It was simple. As in the last case, two rubber tubes were placed in the bladder, and two deep sutures placed in the upper angle of the abdominal wound. A Lister dressing was applied (so the account implies). The patient died the twelfth day. The stone weighed 56 grammes (about 2 oz.), and measured 6 x 4 x 2 centimetres.

The author considers this one of those cases an operator would refuse if he aimed only at success in operating, but must accept if he would furnish temporary relief and the only chance of recovery to the sufferer.

V. The fifth operation was done May 20, 1882, upon a man 60 years old, in very bad condition, with a voluminous stone that filled the bladder, and was immovably fixed in such a way that no instrument could be passed *per urethram*. The stone was so firmly fixed in the pelvis and so tightly held by the bladder that no instrument could be passed round it, and it had to be gouged out and broken up before it could be removed—a proceeding which occupied more than an hour and a half. A new siphon arrangement was placed in the bladder, but did not work well, and had to be replaced with two rubber tubes. After the sixth day a catheter was placed permanently in the urethra, and no other means of drainage employed. The Lister dressing (it is to be inferred) was used, and the wound was healed by the fifty-sixth day.

Treatment of Chancre with Pyrogallic Acid.

At the meeting of the Académie de Médecine of Paris, held January 2, 1883, M. **VIDAL** advocated the employment of an ointment of pyrogallic acid, 10 or 20 parts to 80 parts of fresh lard or vaseline, in the treatment of phagedenic chancres. Starch may be substituted for the vaseline when it is desired to apply the dressing in the form of a powder.

Under this treatment the ulceration is rapidly arrested, and the chancre takes on a healthy appearance; it is quite as efficacious as the cautery, and only causes burning for a few moments. The dressing should be applied twice daily; both the wound and the skin become black in appearance; the virulence of the sore is destroyed in about three days, and this treatment should be discontinued when granulations appear, and the powder of subcarbonate of iron then applied.

M. Vidal states that absorption only occurs to a limited extent when pyrogallic acid is brought in contact with the subcutaneous cellular tissue; its presence in the urine can be determined by the addition of perchloride of iron.—*Journ. de Méd. de Paris*, Jan. 6, 1883.

of abdominal surgery, for the growth weighed thirty-seven pounds and a quarter.

The patient was a female, thirty-three years of age. The tumour was first noticed five years before, and had gradually increased in size; it was painless. When seen by Spiegelberg and Bruntzel in 1879, it was thought to be probably connected with the uterus; menstruation was natural, and had been so since the age of fourteen. An exploratory puncture revealed nothing. In June, 1882, there was much emaciation, but no genuine cachexia; the swelling reached from the ensiform cartilage to the pubic symphysis, and distended the abdomen uniformly in all directions; there were no physical signs of disease in any other organ. Abdominal section was performed in July, with strict antiseptic precautions; the incision extended from the xiphoid process to the symphysis pubis. The tumour was found to be retroperitoneal in situation. The descending colon was felt in front of it at a hand's breadth from the mesial line. Punctures were made into the fluctuating growth without success; but by perseverance the enormous tumour and kidney were got out; the vascular pedicle was secured, the wound closed and drained in the manner of an ovariotomy; and compression and orthodox Listerism were adopted as dressings. There were marked signs of collapse on the removal of the fibroma, which were combated by hypodermic injections of ether and the performance of artificial respiration. The tumour was found to be a gigantic fibroma, which had originated in the left renal capsule, and was composed of a number of lobes, of sizes varying from a child's to a man's head. In this dense fibrous structure there were some areas of a loose, fatty nature, and in the centre was a reddish-yellow area of softening, with a thrombosed vessel in its neighbourhood. The left kidney was seated in a hilus, and its structure was quite normal. The sensation of fluctuation that had been felt was probably due to the presence of the intermingled fat. The operation lasted two hours and a half.

After the operation the pulse was very frequent, the temperature varied a little, the belly remained quite flaccid, and the discharge sweet. Vomiting never occurred, but some discomfort was felt from the loaded state of the tongue and mouth. The quantity of urine was very small for the first six days, but after that it attained to the normal, and so remained. A loose stool was passed on the eighth day. The superficial sutures were removed on the seventh day. The drainage-tube was done away with on the ninth day. On the tenth day something sudden happened, for the temperature rose, and the patient became unconscious and collapsed. This accident was attributed with justice to the descending colon having been ulcerated through, and the escape of a little feces from the small sinus yet remaining. The fistula healed, after being cauterized, in the beginning of August. A fresh escape of feces began at the end of the same month, and, although very small in amount, lasted. Another accident of a very interesting nature happened immediately after the operation, namely, paralysis of both *upper* extremities. Bruntzel speculates on this being of a reflex mechanism. It lasted in the right hand almost six weeks, and longer in the left. For treatment faradization was used. We should like to know more of the distribution and electrical reaction of this paralysis. Notwithstanding these unfortunate occurrences, the patient did so well as to get up at the fourth week, and her weight was seventy-five pounds (just as much again as the tumour weighed). Further improvement of the general health took place, but menstruation had not returned.—*Med. Times and Gazette*, Dec. 16, 1882.

New Mode of Affording Permanent Relief to Intractable Chronic Cystitis and Confirmed Prostatic Retention of Urine.

Sir HENRY THOMPSON, F.R.C.S., believes that if it were possible to suspend all action on the part of the bladder, in such cases, for a few days only, to prevent any accumulation of urine within the organ, to allay the constant and painful want to pass urine, and also, at the same time, to abolish catheterism altogether, with its irritating effect on the urethra, the inflammation of the bladder might subside, and its tolerance of urine might considerably increase.

This object, it seemed to him, might probably be attained by a proceeding of the following kind: First, placing the patient in the lithotomy position, under ether, he proposes to pass a grooved median staff into the bladder, and make, from the raphé of the perinæum, a small vertical incision just above the anus, large enough only to admit the index finger—the incision to terminate in the staff at the membranous portion of the urethra, which should be divided for half an inch at most, so as to admit the finger to traverse the canal to the neck of the bladder. Then, having withdrawn the staff, he proposes to insert a large vulcanized catheter or tube, say about No. 20 (English scale), with its extremity just within the bladder, fastening it there by tape to a bandage round the waist; the tube to be retained as a channel for the urine, for several days at least.

An opportunity soon offered of making an opening in the manner described, for a patient at the age of sixty, who was passing the catheter every hour, and whose vital powers were at the lowest ebb from constant suffering and loss of rest, but whose constitution was apparently sound; and he placed in the bladder, by the new passage, an India-rubber cathether, so that the urine might flow off continuously into a receptacle as fast as it arrived in the bladder. The relief was immediate, and most remarkable. He enjoyed long periods of unbroken sleep, and was unconscious of any pain; while the urine itself, which had been charged with muco-pus and blood, and had been alkaline and offensive in the highest degree, assumed in the course of a few hours a healthy colour, an acid reaction, and was almost clear. In two or three days, the patient had regained appetite and digestion, became cheerful, and showed a change for the better, which no one had been sanguine enough to anticipate. On the eighth day, he removed the catheter from the wound; during the next two days, urine issued by that route at intervals of some hours; but the wound, which was very small, rapidly closed, and the catheter was, of course, again necessary. But the passing of the instrument was no longer painful; the bladder was not inflamed, and could now retain urine three or four hours without inconvenience; while the patient himself, in less than three weeks from the operation, was enjoying an active life out of doors, having been long confined to his room in the suffering condition which has been described in general terms above.

He saw his patient on the 14th of October last. The report, in his own words, was then as follows: "I use the catheter now only six times in the twenty-four hours, instead of eighteen or twenty times. The urine is a little cloudy—mostly acid, sometimes the reverse. I can drive for two or three hours in the afternoon without pain or fatigue, taking usually a morning walk of a mile or more. My general health is good. The degree of relief afforded by the operation can scarcely be exaggerated."

On the 30th of June last the same operation was performed on a gentleman, eighty-three years of age, who was suffering from unusually painful and frequent micturition, the interval rarely amounting to three-quarters of an hour either by day or night. He could, however, nearly empty his bladder by his own efforts, and required the catheter only once a day; its employment affording very little relief. It was one of those rare examples of such a condition existing, in which no calculus and no organic changes in the urinary organs could be discovered. As his constitution was excellent, he did not hesitate (his age notwithstanding) to pursue the course described in the preceding one—failing to find, on examination, either tumour of any kind, or calculus. The immediate relief, however, was so great, that he did not remove the India-rubber tube from the wound until the twelfth day; and he was then very unwilling to part with it, since he had not been so comfortable for upwards of a year. He had also been able to dispense altogether with the use of morphia, which, up to the time of the operation, he had been compelled to take in full doses. The wound rapidly healed; he retained urine from two to three hours, using his catheter only once in the day as before. Such was the report he gave him in the early autumn, as he left town. During his absence, he ventured to take much more exercise than he had been of late accustomed to, and had a relapse. When he saw him on his return (October 7th), he was gradually improving, and was very grateful for the change; saying he would gladly again submit to the operation, if anything like the old painful condition reappeared, as he had experienced nothing but relief from the proceeding. However, such a course does not at present appear to be necessary or imminent.

Such are two typical cases widely differing; the former an example of a comparatively common condition, the latter one of very rare occurrence. In both instances, he attributes the benefit to a temporary suspension of function in both the bladder and the urethra; in the bladder as a containing viscus, in the urethra as a channel or transmitting one.—*Brit. Med. Journ.*, Dec. 9, 1882.

Polypoid Tumour of the Bladder.

At the meeting of the Royal Medical and Chirurgical Society, held Jan. 23, 1883, Sir HENRY THOMPSON gave a short account of four cases in which he had removed polypoid tumours of the bladder through the perinæum; an operation of which there have been few examples, and which was worth consideration, as an attempt to deal with growths which, when removed, had always proved fatal. The first case was that of a lady, aged 31, who had been brought under his notice by Dr. Philson, of Cheltenham. The first symptoms of vesical disease were noticed in 1876, when there was frequent and very painful micturition; and subsequently, there was much hæmaturia, and several attacks of acute cystitis. An examination with the sound showed no calculus or definite tumour, but the walls of the bladder were felt to be soft and flabby. The urethra was dilated, and a sessile growth, scarcely pedunculated, was removed from the base of the bladder. There was a good deal of bleeding at the time, but, after a week, micturition ceased to be painful; in three weeks she had control over her urine for four hours at a time. She rapidly regained good health, and there had been no return of the symptoms. An examination of the growth by Mr. Stanley Boyd showed a vascular tumour, with several short pedicles, and a velvety covering of club-shaped processes, about one-sixteenth of an inch long. The second case was of a man, aged 41, whose symptoms dated from 1861. There was great irritability of the bladder, and much painful hæmaturia, which had not been materially relieved by styptics. A suspicion of vesical tumour was confirmed by examination with the finger, and a large mass removed by a central incision through the perinæum. The case, however, was seen in too late a stage to avert a fatal issue. No necropsy was obtainable. The third case was that of a medical man, examined by the sound in connection with Dr. George Johnson and Dr. Cupman, in December, 1880. A note was made at the time, that the walls of the bladder "felt soft," an expression which Sir Henry Thompson was in the habit of using to describe an abnormal condition, in which the signs of tumours were not definite. Styptics gave temporary relief, but after about six months the symptoms became acute, and recourse was had to digital examination. Polypoid growths were felt and removed by lateral forceps, from the side of the bladder. The recovery was uninterrupted and rapid. The fourth case was of a man, aged 67, short, stout, and heavily built. He had had occasional hæmaturia since 1876, with occasional passage of uric acid calculi. On May 26, 1882, lithotrity was performed at one sitting, and two hundred grains of uric acid were removed. During the summer and autumn, there was much pain and loss of blood, and on January 27, 1883, a digital exploration was made. The perinæum was deep, and the operation presented some difficulties, but a tumour was successfully removed from the base of the bladder. The progress had been favourable on the whole, but some gouty symptoms had developed on January 22d. Microscopical specimens of the tumours were placed on the table. They were all fibromata.—*Brit. Med. Journ.*, Jan. 27, 1883.

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Suprapubic Lithotomy.

This somewhat neglected operation has been done quite a number of times in Paris within the past few years. Prof. Guyon reports in the first number of *Annales des Maladies des Organes Génito-Urinaires*, Dec. 1882, five cases of stone in which he had operated above the pubes within a twelvemonth. In all his operations he adopted the ingenious plan, recommended and practised by Prof. Petersen, of Kiel, of raising the distended bladder out of the pelvis by means of a colpeurynter placed in the rectum, and inflated with air or water.

As suprapubic lithotomies are rather rare, and as these operations were interesting and instructive, we give a brief epitome of them.

I. The first operation was done November 19, 1881, upon a man 72 years old. Nine days earlier an attempt to crush had been abandoned, because the stone was found to be too large and too hard. The method of Petersen was exactly carried out, and antiseptic precautions, including the spray, were taken. The extraction of the stone was very easy. The bladder was not sewed up, but a large red rubber drainage-tube (10 mm. diam.) was inserted into it, and brought out of the lower angle of the wound, and a Lister dressing applied. A rubber catheter (No. 18) was placed in the urethra. The drainage began at once to find its way out alongside of the tube—not through it—and the Lister dressing was soaked, and had to be disused. The catheter provoked so intense a urethritis that it had to be removed the eighth day. The wound was healed the fortieth day. The stone weighed 84 grammes (nearly 3 oz.), dry, and measured 6 x 4 x 3 centimetres.

The patient was in bad condition before operation, but there was little pus in his urine, and it was acid in reaction.

II. The second operation was on a man of 69, in good general condition, with little evidence of cystitis, and none of nephritis. Lithotrity was attempted, and failed, because the stone could not be crushed. Suprapubic lithotomy was done January 4, 1882. A venous plexus was encountered, which bled freely when punctured, but ceased to bleed as soon as the tension of the bladder had been relieved by its incision and the removal of the rubber balloon in the rectum. One suture was placed in the upper angle of the abdominal wound. A drainage-tube doubled into a U-shape was placed in the bladder, a catheter was left in the urethra, and a Lister dressing applied. The patient died in three days of diffuse subperitoneal infiltration. The stone weighed 54 grammes (nearly 2 oz.), and measured nearly 6 x 4 x 3 centimetres (57 x 43 x 28 millimetres).

III. The third operation was done upon a man 69 years old, in good general condition, with no kidney disease and little cystitis. An attempt at lithotrity having failed, eleven days later, March 8, 1882, suprapubic lithotomy was carried out. Two stones were easily removed. Antiseptic precautions were used, and a Lister dressing applied after inserting a siphon tube in the bladder. No catheter was placed in the urethra. The siphon apparatus did not work perfectly, and was replaced with two simple unfenestrated tubes (*"en flûte de Pan"*) introduced into the bladder, and carried over the pubes to a urinal between the thighs. After this the Lister dressing could be used to the end of the treatment. On the eleventh day the tubes were removed, and a catheter placed permanently in the urethra. The patient's wound was completely cicatrized the fifty-first day. Of the stones, one weighed 55 grammes (nearly 2 oz.), and measured 5 x 4 x 2 centimetres. The other weighed 53 grammes (about 2 oz.), and was almost exactly the same size as the first.

IV. The fourth operation was done on a man 57 years old, in bad condition, and in whom lithotrity had failed ten days before. The operation was done May 4, 1882. It was simple. As in the last case, two rubber tubes were placed in the bladder, and two deep sutures placed in the upper angle of the abdominal wound. A Lister dressing was applied (so the account implies). The patient died the twelfth day. The stone weighed 56 grammes (about 2 oz.), and measured 6 x 4 x 2 centimetres.

The author considers this one of those cases an operator would refuse if he aimed only at success in operating, but must accept if he would furnish temporary relief and the only chance of recovery to the sufferer.

V. The fifth operation was done May 20, 1882, upon a man 60 years old, in very bad condition, with a voluminous stone that filled the bladder, and was immovably fixed in such a way that no instrument could be passed *per urethram*. The stone was so firmly fixed in the pelvis and so tightly held by the bladder that no instrument could be passed round it, and it had to be gouged out and broken up before it could be removed—a proceeding which occupied more than an hour and a half. A new siphon arrangement was placed in the bladder, but did not work well, and had to be replaced with two rubber tubes. After the sixth day a catheter was placed permanently in the urethra, and no other means of drainage employed. The Lister dressing (it is to be inferred) was used, and the wound was healed by the fifty-sixth day.

Treatment of Chancre with Pyrogallic Acid.

At the meeting of the Académie de Médecine of Paris, held January 2, 1883, M. **VIDAL** advocated the employment of an ointment of pyrogallic acid, 10 or 20 parts to 80 parts of fresh lard or vaseline, in the treatment of phagedenic chancres. Starch may be substituted for the vaseline when it is desired to apply the dressing in the form of a powder.

Under this treatment the ulceration is rapidly arrested, and the chancre takes on a healthy appearance; it is quite as efficacious as the cautery, and only causes burning for a few moments. The dressing should be applied twice daily; both the wound and the skin become black in appearance; the virulence of the sore is destroyed in about three days, and this treatment should be discontinued when granulations appear, and the powder of subcarbonate of iron then applied.

M. Vidal states that absorption only occurs to a limited extent when pyrogallic acid is brought in contact with the subcutaneous cellular tissue; its presence in the urine can be determined by the addition of perchloride of iron.—*Journ. de Méd. de Paris*, Jan. 6, 1883.

Ligature of the Arteria Innominata for Subclavian Aneurism.

At the meeting of the British Medical Association, held in Worcester, August last, Mr. Wm. Thomson read the report of the following case before the Section of Surgery:—.

John M., aged 49, a locksmith, was admitted to the Richmond Surgical Hospital, on February 7, 1882, suffering from aneurism of the right subclavian artery. He was a man of good development, healthy looking, and of dark complexion. His hair was grizzled. He had never had syphilis, had lived a fairly temperate life, and had been for eighteen months in America, where, in the war with the Confederate States, he had received a bayonet wound on the right scapula For two years and a half he had been suffering from pains in the right arm, which he thought were due to rheumatism; but, ten months before his admission, he first noticed a small tumour, "about as large as a marble," in the posterior inferior triangle of the neck. He had sought advice at another dispensary, and at our own, but he had refused to come into hospital until he found that the tumour was steadily progressing, and that, in addition to increase of pain, he was unable to work. The tumour, as it now appeared, was globular, and about two and a half inches in diameter, pulsating violently, with evidently very thin walls. It occupied the posterior inferior triangle, its inner margin being close against the outer edge of the sterno-mastoid muscle. The finger passed behind the muscle, received a very strong impulse, and the vessel, so far as it could thus be traced towards its second stage, appeared to be enlarged. The pulse varied from 130 to 140, and was very full. No pulse could, as a rule, be felt in the right radial artery; but occasionally it could be made out as a faint flicker. The arm could not be raised from the side; the pain in the shoulder was unbearable, and the patient lay in bed with his left hand grasping that part tightly, as he said it gave him some relief. The heart-sounds were healthy. The pupils were regular. There was no cough, and no laryngeal irritation. The other functions of the body were natural.

The patient was kept under observation for a week, being at the same time treated with tincture of digitalis, but without making any impress upon the rapidity of the pulse. The majority of opinion, on consultation, was in favour of attempting operation upon the first stage of the subclavian, and, in the event of that proving diseased, upon the innominate. The case was put before the patient, who consented to the proposal; but, after an interview with his son, he declined it. He, however, remained in hospital, and for some time the iodide of potassium treatment was tried, but without any appreciable result. The pulse still continued high, and the tumour increased in size; while the pain in the arm was combated by frequent hypodermic injections of morphia.

The patient suddenly took his discharge on March 30th, as he said he had "private business" to transact. He once visited Mr. Thomson at his house some weeks afterwards. The tumour had then grown to a considerable size, passing upwards in the neck. The pain kept him from sleeping, for he had now no hypodermic injections. The hand was quite numb and œdematous. There was no pulsation to be felt in the radial or brachial arteries. He promised to come into hospital next day, but he did not return until May 22d. He now stated that, during the preceding night, the tumour ceased to pulsate for over an hour. When Mr. Thomson saw him, pulsation was as violent as ever; all the local symptoms were aggravated, but the pulse had fallen to 100. Measured by the callipers, the tumour now marked three inches and a quarter in diameter in all directions. A further consultation was held, and ligature was again determined upon, but on the 29th, the day but one fixed for operation, he was sent for to see the patient. All pulsation had stopped in the aneurism, which was now hard and tense. He resolved, therefore, to postpone any operative interference. The pulsation returned after about ten hours, and next morning was as bad as before. He had now three-minim doses of tincture of aconite every three hours, but the pulse was not affected.

On the 31st, pulsation stopped for fifteen minutes, but then returned, accompanied by great pain. He was now ordered three-minim doses of tincture of aconite every hour for twelve hours, the effect to be watched. The pulse-rate, which had been 116, was reduced to 96; but next morning the pulse was full and bounding at 100.

On June 4th, the patient said the tumour had ceased to beat several times, but this was not verified by the resident pupil. The pulsation was, however, feebler. During all this time the tumour continued to grow in size, until it reached three inches and a half in diameter at the base. The movement of pulsation was observed over a large area. When he sat up, the shoulder and the whole scapular region rose and fell with each pulsation of the aneurism. The hope which was entertained of spontaneous cure did not appear likely to be fulfilled; and, in face of the fact that the disease was progressing, it was unanimously agreed that operation should not longer be delayed.

Accordingly, on June 9th, the patient, being deeply anæsthetized, was placed in the usual position on his back, with the head thrown well towards the left side. A free incision was made along his clavicle, from the anterior border of the sterno-mastoid outwards, and joined its inner extremity by an incision along the anterior border of the same muscle. The clavicular attachment of the muscle was divided, and turned up, and then the sterno-hyoid and sterno-thyroid were cut to discover the carotid, carefully avoiding the branches of the omo-hyoid plexus, which could be seen. The vessel was of very large size, so much so, indeed, that some of those present thought Mr. Thomson had arrived at the innominate. This belief was encouraged by the fact that, at first, pressure upon it with the finger stopped pulsation in the carotid higher up, and also in the tumour; but this did not always occur, and was evidently the result of a pressure communicated from a distance to the subclavian. He now went further down, in search of the bifurcation; but this was an extremely tedious and anxious proceeding, and he was compelled to divide nearly the whole of the sternal attachment of the sterno-mastoid. Coming at last upon it, the origins of the subclavian and the carotid, at what was an alarming depth, the difficulty of reaching the innominate beyond was increased by the occurrence of a heavy thundercloud, which seemed to shut out all the top light. A mirror was then used to throw light into the wound, but without much good result, and he was here much delayed. The sheath of the innominate was at last slowly scraped through; and, using an ordinary aneurism needle for this purpose, he succeeded in passing it under the vessel, which appeared to be healthy. He then determined to thread it with ordinary silk, and to use this to draw back the tape ligature; but failing in this, as the opening between the sheath and the vessel was too small, he withdrew everything, and, threading a special needle (invented by Mr. Barwell), with the curved portion movable by a lever, he introduced this with comparative ease. He then, before tying, tested the effect of pressure upon the vessel between his finger and the tape, lifting the vessel freely from its bed; and, finding that all movement ceased in the aneurism and in the carotid, he secured the ligature with three knots, drawing the ends with moderate firmness. The edges of the wound were brought together, and a drainage-tube having been introduced into the lower part, an antiseptic dressing was applied and fixed by means of an elastic roller. The arm and shoulder were also swathed in sheets of wadding, which had been previously heated. He was at once carried to bed; and Mr. Thomson saw him again in about half an hour. The left side of the face was cold, but the pupils were equal. He was only recovering from the effects of the ether; but it was noticed that, when he attempted to ask some questions, he always broke down in the middle of the sentence, and then seemed to be trying to recollect what he wished to say. This was the only symptom of brain disturbance that ever presented itself; and, in the evening, he seemed to have his mental faculties unimpaired. He was ordered ice, milk, soda-water, and beef-tea. Two hours after the operation, the patient complained of pain in the shoulder, and had one-third of a grain of morphia hypodermically; this was repeated in two hours. He slept for three hours during the evening. The evening temperature was 100.6° on the right side; 99.4° on the left; pulse 136. At eleven o'clock, the temperature was 99.6° on the right side; 99° on the left; pulse 120. He had no pain.

The patient did fairly well until July 8th (thirtieth day), when pulsation was visible at the apex of the flap, coming from the position of the innominate. He passed a very good day. At 11.15 P. M. the patient noticed that he was bleeding. The hemorrhage had stopped when he was seen by the house surgeon. Mr. Thomson saw the patient soon afterwards. The wound was examined; there was no bleeding. The dressing was renewed, and a shot-bag placed over all. The amount of blood lost was about three ounces. A hypodermic injection of morphia was given, and ice was ordered.

No further hemorrhage occurred until July 17th (thirty-ninth day). At half-past three this morning a very severe hemorrhage took place. When the residing surgeon saw the patient it had stopped; but the clothes were saturated and the blood lay in a large clot on the floor. The patient was greatly blanched and collapsed. A hypodermic injection of ether was given. He had a cold, clammy sweat and flickering pulse. His voice was a mere whisper. He did not lose consciousness, but said he could not see. The patient then rallied somewhat, and complained of pains in his head and limbs. Increased pressure was made with shot-bags, the dressings not being disturbed. Warm jars were applied to the feet and body. Further stimulation was prohibited. Ice and beef-tea in small quantities were ordered.

July 18th (fortieth day). There was no bleeding; he was very weak; the treatment was continued as before. The pain in the limbs was treated with morphia.

July 19th (forty-first day). He had rallied considerably. His expression was much improved; colour had returned to his face, and his pulse was stronger but jerky. He had pain in the limbs. As his bedding had not been disturbed since the hemorrhage, he was carefully lifted by seven assistants, and a clean mattress, etc., were substituted.

July 20th (forty-second day). He complained of difficulty of breathing at 2 A. M., and much pain. Half a grain of morphia was given subcutaneously. He slept for some time, and died quietly at 8.15 A. M. There was no recurrence of bleeding.

Post-mortem Examination.—A necropsy was made a few hours afterward by Dr. Woodhouse, pathologist and assistant physician, and Mr. Thomson; but, as any interference had been forbidden by the patient's son, this had to be done to a limited degree. Only the parts actually involved in the disease and the operation could be removed. A small opening in the skin was the only part that was unhealed; the rest of the incisions were firmly cicatrized. The diameter of the tumour was 2½ by 2½ inches. When the skin was reflected, there was no trace of infiltration of parts, and no sign of blood. The opening in the skin led into a small cavity containing about a drachm of pus. When this was removed, the cavity was found to be about three-quarters of an inch in depth above and slightly behind the right sterno-clavicular articulation, and pointing downwards, backwards, and inwards. It received the end of the little finger like a thimble. The tumour itself was covered by skin and platysma, and some outer fibres of the sterno-mastoid muscle; the omo-hyoid was stretched across it. The phrenic nerve passed along the inner side, borne off by the anterior scalenus. The muscle was bulged forwards, but the nerve did not seem to be pressed upon. Across the whole surface of the tumour were, lightly stretched and flattened, large roots and branches of the brachial plexus. In the anterior inferior triangle, the tissues overlying the great vessels were so matted together that thay could be dissected with difficulty, especially at the lower part of the carotid. The internal jugular vein was collapsed. The common carotid artery was full and firm to the touch as far as the bifurcation. The subclavian vein was empty, and was tightly stretched along the lower and anterior part of the tumour. Its coats were thin, and in two places, near the junction of the internal jugular, there were small translucent patches, apparently from thinning of the internal coat. A few drops of pus oozed out of the lower end of the carotid into the ulcer which terminated the sinus. On turning forward the anterior scalenus, the aneurism was found to involve the second part of the artery. The tumour rested upon the first rib, and pressed against the clavicle in front. These bones were removed, the rib with its attachment to the aneurism, and as much of the aorta as could be reached was cut across, and the parts taken out *en masse.*

The tumour was found to spring from the posterior part of the second and third stages of the subclavian artery. It was flattened below, where it rested on the rib, and passed upwards for three inches, ending in a dome-like surface. Corresponding to the position of the clavicle it was constricted. Its clavicular portion measured 2⅜ inches antero-posteriorly; its basal, 2¾.

The artery was elsewhere normal in size. It formed a cord from which the tumour sprang. The axillary portion, so far as it could be removed, was firmly plugged. All the vessels of the first stage were traced, and were pervious.

The ulceration, which was somewhat larger than a sixpence in area, was situated at the bifurcation of the innominate into the subclavian and carotid arteries. It involved the anterior portion of the three vessels, and looking into it, the clots blocking the three vessels could be seen. The surface was gray and shreddy. There was no staining of blood visible. The vessels were partly slit, and a syringe was used to force water through in the direction of the ulcer, but although this was carefully tried with each vessel, not a drop passed through. The incisions were extended along the vessels towards the ulcer.

The wall of the innominate was thickened almost from its origin, and this thickening increased gradually as the side of the ligature was approached until the depth was about two lines. The clot was firmly adherent to the walls, and extended backwards through the greater extent of the vessel. At its cardiac side was a small tongue of organized clot rather loosely attached; and between it and the firmly adherent clot were some retiform bands of fibrous tissue deeply stained with blood.

The subclavian was found to be empty, except at its cardiac end, which was well blocked with a firmly adherent clot. This projected towards the aneurism for about half an inch. No water could be forced through.

The common carotid felt solid, but on opening it, it was found that the centre of the clot had degenerated, and was occupied by pulpy purulent material. The walls of the vessel were thickened. The clot terminated near the bifurcation into the external and internal carotids.

The aorta was thickened, atheromatous, and, in patches, calcareous. The lung and pleura as seen on the right side were healthy.

An incision was made into the aneurism from summit to base. It contained about half an ounce of dark, thick blood, and in the centre was some passive clot occupying a cavity about the size of a walnut. The process of cure was evidenced by fibrinous layers upon the walls to the extent of a third of an inch, and on the inner sides of this coating were masses of coagulum less firm, but evidently undergoing consolidation.

A prolonged and careful search was made for traces of the ligature, but none could be found. On the posterior of the innominate, opposite the ulceration, was some fatty tissue intimately adherent to the wall, which could with difficulty be cleaned.

A more minute examination of the parts was subsequently made. The vessels were all divided into the ulcer. This showed that the innominate had been constricted at about a quarter of an inch from the cardiac margin of the ulcer. The walls were not divided, and the ulcer had not taken origin at the seat of the ligature. The vessel was not occluded by adhesion of the inner surfaces, but a chink remained at the ligatured portion through which the clot continued, and had been united to the clots in the subclavian and carotid. The clot in the subclavian was well established. The ulcer had eaten into the clot in the innominate at its centre, and had in this way caused the hemorrhage.

In order to search for the ligature, an inch of the posterior wall of the innominate was cut out, and several sections of it were made by Mr. P. S. Abraham, Curator of the Royal College of Surgeons' Museum, but no trace of it could be found. The coats of the vessel were undivided.

In commenting on his case, Mr. Thomson says: "I believe that ligature of the arteria innominata may be safely done. A careful study of the cases which have been published will show how very near many of them came to success. Mott's case, and Gräfe's, were up walking about before the wound was absolutely closed, and it was owing to some indiscretion that the recent adhesions were torn and that hemorrhage was set up. In Gräfe's, Mott's, Lizar's, Gore's, Bland's, and Bickersteth's cases, the innominate was more or less occupied by firm clot. The carotid was occupied by a clot in Gore's, Arendt's, Mott's, Lizar's, and Bland's cases. The subclavian was closed in Smyth's case (after ligature of the vertebral), almost up to the thyroid axis; and in Arendt's.' It is to be observed, with reference to these facts, that in some of the reported cases details are not given; and that in others the patients did not live long enough for such processes to be set up effectively. Here, at all events, in a considerable proportion of cases, we have that condition present which is regarded as one of the essentials of success in deligation of an artery in its continuity. The clot is found to be present, not only in the innominate, but also in the two large vessels which branch off from it. Death in the majority of cases, however, resulted from hemorrhage, and this chiefly from ulceration of the ligature through the vessel, and an absence of sufficient adhesive power in the tissues so divided to make closure permanent. It was an accidental result, if I may call it so, not a result to be looked for as a necessity. The possibility of obtaining obliterating clots in the innominate, subclavian, and carotid, or in the innominate and carotid, being shown, it only remains that, to make a long stride forward to success, we should use an antiseptic animal material which will not divide the vessel, but only keep its walls approximated for a sufficiently long time. So we find Mr. Lister declaring that, using such a material, 'for my own part I should now, without hesitation, undertake ligature of the innominate, believing that it would prove a very safe procedure' (*Lancet*, April 3, 1869). It was with a like belief that I undertook this operation.

pulsation had stopped in the aneurism, which was now hard and tense. He resolved, therefore, to postpone any operative interference. The pulsation returned after about ten hours, and next morning was as bad as before. He had now three-minim doses of tincture of aconite every three hours, but the pulse was not affected.

On the 31st, pulsation stopped for fifteen minutes, but then returned, accompanied by great pain. He was now ordered three-minim doses of tincture of aconite every hour for twelve hours, the effect to be watched. The pulse-rate, which had been 116, was reduced to 96; but next morning the pulse was full and bounding at 100.

On June 4th, the patient said the tumour had ceased to beat several times, but this was not verified by the resident pupil. The pulsation was, however, feebler. During all this time the tumour continued to grow in size, until it reached three inches and a half in diameter at the base. The movement of pulsation was observed over a large area. When he sat up, the shoulder and the whole scapular region rose and fell with each pulsation of the aneurism. The hope which was entertained of spontaneous cure did not appear likely to be fulfilled; and, in face of the fact that the disease was progressing, it was unanimously agreed that operation should not longer be delayed.

Accordingly, on June 9th, the patient, being deeply anæsthetized, was placed in the usual position on his back, with the head thrown well towards the left side. A free incision was made along his clavicle, from the anterior border of the sterno-mastoid outwards, and joined its inner extremity by an incision along the anterior border of the same muscle. The clavicular attachment of the muscle was divided, and turned up, and then the sterno-hyoid and sterno-thyroid were cut to discover the carotid, carefully avoiding the branches of the omo-hyoid plexus, which could be seen. The vessel was of very large size, so much so, indeed, that some of those present thought Mr. Thomson had arrived at the innominate. This belief was encouraged by the fact that, at first, pressure upon it with the finger stopped pulsation in the carotid higher up, and also in the tumour; but this did not always occur, and was evidently the result of a pressure communicated from a distance to the subclavian. He now went further down, in search of the bifurcation; but this was an extremely tedious and anxious proceeding, and he was compelled to divide nearly the whole of the sternal attachment of the sterno-mastoid. Coming at last upon it, the origins of the subclavian and the carotid, at what was an alarming depth, the difficulty of reaching the innominate beyond was increased by the occurrence of a heavy thundercloud, which seemed to shut out all the top light. A mirror was then used to throw light into the wound, but without much good result, and he was here much delayed. The sheath of the innominate was at last slowly scraped through; and, using an ordinary aneurism needle for this purpose, he succeeded in passing it under the vessel, which appeared to be healthy. He then determined to thread it with ordinary silk, and to use this to draw back the tape ligature; but failing in this, as the opening between the sheath and the vessel was too small, he withdrew everything, and, threading a special needle (invented by Mr. Barwell), with the curved portion movable by a lever, he introduced this with comparative ease. He then, before tying, tested the effect of pressure upon the vessel between his finger and the tape, lifting the vessel freely from its bed; and, finding that all movement ceased in the aneurism and in the carotid, he secured the ligature with three knots, drawing the ends with moderate firmness. The edges of the wound were brought together, and a drainage-tube having been introduced into the lower part, an antiseptic dressing was applied and fixed by means of an elastic roller. The arm and shoulder were also swathed in sheets of wadding, which had been previously heated. He was at once carried to bed; and Mr. Thomson saw him again in about half an hour. The left side of the face was cold, but the pupils were equal. He was only recovering from the effects of the ether; but it was noticed that, when he attempted to ask some questions, he always broke down in the middle of the sentence, and then seemed to be trying to recollect what he wished to say. This was the only symptom of brain disturbance that ever presented itself; and, in the evening, he seemed to have his mental faculties unimpaired. He was ordered ice, milk, soda-water, and beef-tea. Two hours after the operation, the patient complained of pain in the shoulder, and had one-third of a grain of morphia hypodermically; this was repeated in two hours. He slept for three hours during the evening. The evening temperature was 100.6° on the right side; 99.4° on the left; pulse 136. At eleven o'clock, the temperature was 99.6° on the right side; 99° on the left; pulse 120. He had no pain.

The patient did fairly well until July 8th (thirtieth day), when pulsation was visible at the apex of the flap, coming from the position of the innominate. He passed a very good day. At 11.15 P. M. the patient noticed that he was bleeding. The hemorrhage had stopped when he was seen by the house surgeon. Mr. Thomson saw the patient soon afterwards. The wound was examined; there was no bleeding. The dressing was renewed, and a shot-bag placed over all. The amount of blood lost was about three ounces. A hypodermic injection of morphia was given, and ice was ordered.

No further hemorrhage occurred until July 17th (thirty-ninth day). At half-past three this morning a very severe hemorrhage took place. When the residing surgeon saw the patient it had stopped; but the clothes were saturated and the blood lay in a large clot on the floor. The patient was greatly blanched and collapsed. A hypodermic injection of ether was given. He had a cold, clammy sweat and flickering pulse. His voice was a mere whisper. He did not lose consciousness, but said he could not see. The patient then rallied somewhat, and complained of pains in his head and limbs. Increased pressure was made with shot-bags, the dressings not being disturbed. Warm jars were applied to the feet and body. Further stimulation was prohibited. Ice and beef-tea in small quantities were ordered.

July 18th (fortieth day). There was no bleeding; he was very weak; the treatment was continued as before. The pain in the limbs was treated with morphia.

July 19th (forty-first day). He had rallied considerably. His expression was much improved; colour had returned to his face, and his pulse was stronger but jerky. He had pain in the limbs. As his bedding had not been disturbed since the hemorrhage, he was carefully lifted by seven assistants, and a clean mattress, etc., were substituted.

July 20th (forty-second day). He complained of difficulty of breathing at 2 A. M., and much pain. Half a grain of morphia was given subcutaneously. He slept for some time, and died quietly at 8.15 A. M. There was no recurrence of bleeding.

Post-mortem Examination.—A necropsy was made a few hours afterward by Dr. Woodhouse, pathologist and assistant physician, and Mr. Thomson; but, as any interference had been forbidden by the patient's son, this had to be done to a limited degree. Only the parts actually involved in the disease and the operation could be removed. A small opening in the skin was the only part that was unhealed; the rest of the incisions were firmly cicatrized. The diameter of the tumour was 2½ by 2¼ inches. When the skin was reflected, there was no trace of infiltration of parts, and no sign of blood. The opening in the skin led into a small cavity containing about a drachm of pus. When this was removed, the cavity was found to be about three-quarters of an inch in depth above and slightly behind the right sterno-clavicular articulation, and pointing downwards, backwards, and inwards. It received the end of the little finger like a thimble. The tumour itself was covered by skin and platysma, and some outer fibres of the sterno-mastoid muscle; the omo-hyoid was stretched across it. The phrenic nerve passed along the inner side, borne off by the anterior scalenus. The muscle was bulged forwards, but the nerve did not seem to be pressed upon. Across the whole surface of the tumour were, lightly stretched and flattened, large roots and branches of the brachial plexus. In the anterior inferior triangle, the tissues overlying the great vessels were so matted together that thay could be dissected with difficulty, especially at the lower part of the carotid. The internal jugular vein was collapsed. The common carotid artery was full and firm to the touch as far as the bifurcation. The subclavian vein was empty, and was tightly stretched along the lower and anterior part of the tumour. Its coats were thin, and in two places, near the junction of the internal jugular, there were small translucent patches, apparently from thinning of the internal coat. A few drops of pus oozed out of the lower end of the carotid into the ulcer which terminated the sinus. On turning forward the anterior scalenus, the aneurism was found to involve the second part of the artery. The tumour rested upon the first rib, and pressed against the clavicle in front. These bones were removed, the rib with its attachment to the aneurism, and as much of the aorta as could be reached was cut across, and the parts taken out *en masse*.

The tumour was found to spring from the posterior part of the second and third stages of the subclavian artery. It was flattened below, where it rested on the rib, and passed upwards for three inches, ending in a dome-like surface. Corresponding to the position of the clavicle it was constricted. Its clavicular portion measured 2⅛ inches antero-posteriorly; its basal, 2¾.

The artery was elsewhere normal in size. It formed a cord from which the tumour sprang. The axillary portion, so far as it could be removed, was firmly plugged. All the vessels of the first stage were traced, and were pervious.

The ulceration, which was somewhat larger than a sixpence in area, was situated at the bifurcation of the innominate into the subclavian and carotid arteries. It involved the anterior portion of the three vessels, and looking into it, the clots blocking the three vessels could be seen. The surface was gray and shreddy. There was no staining of blood visible. The vessels were partly slit, and a syringe was used to force water through in the direction of the ulcer, but although this was carefully tried with each vessel, not a drop passed through. The incisions were extended along the vessels towards the ulcer.

The wall of the innominate was thickened almost from its origin, and this thickening increased gradually as the side of the ligature was approached until the depth was about two lines. The clot was firmly adherent to the walls, and extended backwards through the greater extent of the vessel. At its cardiac side was a small tongue of organized clot rather loosely attached; and between it and the firmly adherent clot were some retiform bands of fibrous tissue deeply stained with blood.

The subclavian was found to be empty, except at its cardiac end, which was well blocked with a firmly adherent clot. This projected towards the aneurism for about half an inch. No water could be forced through.

The common carotid felt solid, but on opening it, it was found that the centre of the clot had degenerated, and was occupied by pulpy purulent material. The walls of the vessel were thickened. The clot terminated near the bifurcation into the external and internal carotids.

The aorta was thickened, atheromatous, and, in patches, calcareous. The lung and pleura as seen on the right side were healthy.

An incision was made into the aneurism from summit to base. It contained about half an ounce of dark, thick blood, and in the centre was some passive clot occupying a cavity about the size of a walnut. The process of cure was evidenced by fibrinous layers upon the walls to the extent of a third of an inch, and on the inner sides of this coating were masses of coagulum less firm, but evidently undergoing consolidation.

A prolonged and careful search was made for traces of the ligature, but none could be found. On the posterior of the innominate, opposite the ulceration, was some fatty tissue intimately adherent to the wall, which could with difficulty be cleaned.

A more minute examination of the parts was subsequently made. The vessels were all divided into the ulcer. This showed that the innominate had been constricted at about a quarter of an inch from the cardiac margin of the ulcer. The walls were not divided, and the ulcer had not taken origin at the seat of the ligature. The vessel was not occluded by adhesion of the inner surfaces, but a chink remained at the ligatured portion through which the clot continued, and had been united to the clots in the subclavian and carotid. The clot in the subclavian was well established. The ulcer had eaten into the clot in the innominate at its centre, and had in this way caused the hemorrhage.

In order to search for the ligature, an inch of the posterior wall of the innominate was cut out, and several sections of it were made by Mr. P. S. Abraham, Curator of the Royal College of Surgeons' Museum, but no trace of it could be found. The coats of the vessel were undivided.

In commenting on his case, Mr. Thomson says: "I believe that ligature of the arteria innominata may be safely done. A careful study of the cases which have been published will show how very near many of them came to success. Mott's case, and Gräfe's, were up walking about before the wound was absolutely closed, and it was owing to some indiscretion that the recent adhesions were torn and that hemorrhage was set up. In Gräfe's, Mott's, Lizar's, Gore's, Bland's, and Bickersteth's cases, the innominate was more or less occupied by firm clot. The carotid was occupied by a clot in Gore's, Arendt's, Mott's, Lizar's, and Bland's cases. The subclavian was closed in Smyth's case (after ligature of the vertebral), almost up to the thyroid axis; and in Arendt's.' It is to be observed, with reference to these facts, that in some of the reported cases details are not given; and that in others the patients did not live long enough for such processes to be set up effectively. Here, at all events, in a considerable proportion of cases, we have that condition present which is regarded as one of the essentials of success in deligation of an artery in its continuity. The clot is found to be present, not only in the innominate, but also in the two large vessels which branch off from it. Death in the majority of cases, however, resulted from hemorrhage, and this chiefly from ulceration of the ligature through the vessel, and an absence of sufficient adhesive power in the tissues so divided to make closure permanent. It was an accidental result, if I may call it so, not a result to be looked for as a necessity. The possibility of obtaining obliterating clots in the innominate, subclavian, and carotid, or in the innominate and carotid, being shown, it only remains that, to make a long stride forward to success, we should use an antiseptic animal material which will not divide the vessel, but only keep its walls approximated for a sufficiently long time. So we find Mr. Lister declaring that, using such a material, 'for my own part I should now, without hesitation, undertake ligature of the innominate, believing that it would prove a very safe procedure' (*Lancet*, April 3, 1869). It was with a like belief that I undertook this operation.

"It is true, I regret to say, that in my case the old tale of hemorrhage was repeated; but there can be no doubt that it was not here set up by the ligature cutting through the vessel. The position of the ligature is only marked by a constriction, and the margin of the ulcer does not come within more than a quarter of an inch of that line. The coats are not divided, and the ligature appears to have done its work by gripping the vessel until a well-organized clot was formed. The clot had also formed on the distal side, so that the ulcer, as in most cases, had for its lateral walls nothing but organized clot in the three vessels. This clot was gradually thinned by the ulcerative process, and at last, as I believe, a weak spot in the portion in the innominate yielded to pressure and gave way. It may be said here that the purulent degeneration of the centre of the clot in the carotid was probably due to the access of pus from the ulcer.

"But, it will be asked, what produced the ulceration, and why did my case fail if I used the precautions which I have faith in? My answer is, that the ligation did not fail. It held the vessel until a firm, organized clot was formed; and that if an ulcer had not formed, at a distance from the ligature be it remembered, the patient would have recovered. The history of the ulcer is associated with the use of the drainage-tube. This I left in for about six days, except when it was removed to be cleaned. When it was finally removed, it left behind it a sinus leading down to the bottom of the wound. The wound was then perfectly aseptic, the patient's temperature normal, and everything going on well. But this track, holding some discharge, provided a nest for septic organisms when these unhappily got access. From that on the vessel was subjected to the eroding action of pus, small in quantity though it was, as it lay in a pocket on the face of the vessel. Knowing what had happened in Mott's case, I correctly feared that an ulcer had formed; and although I did all that I could, its action could not be stayed. How the evil originally arose I can only surmise, but I believe it was owing to the difficulty of keeping the dressing in accurate position at the neck.

"Judging from my experience, I should certainly, in another case, remove the drainage-tube early, and endeavour to get speedy closure of the wound in its deeper parts. It is to be borne in mind that there is much retraction of the tissues, and that a large hole is left after the operation is terminated. The skin is brought together and heals much more quickly than the deeper parts, which are not approximated in the same way. The clavicle also assists in keeping the soft tissues from falling together and getting an early closure. This has happened in every case on record, and it adds enormously to the risk. To overcome this I should, in another case, apply carefully adjusted sponges outside the dressings, and over these place light shot-bags (a few ounces) so secured that they would exert constant and moderate pressure upon the wound. The head should also be brought well over to the right side, so as to relax the tissues, and by that means an effort be made to aid the rapid consolidation of the parts.

"It has been suggested by some surgeons that, in such an operation as this, the carotid ought to be ligatured at the same time, with the object of cutting off the reflux current of blood from contact with the seat of ligature on the innominate. Thus Barwell (*On Aneurism*, p. 53) thinks this question 'demands of necessity an affirmative answer. Blood will at once, when the innominate alone is ligatured, find its way through the carotid into the subclavian in quantity large enough to compromise the cure. The ligature on the carotid does not complicate the operation, nor add to—indeed, it rather subtracts from—the danger.' But, as a matter of fact, the history of the cases shows that it is not necessary. In a large number, as in my own, a clot had formed up to the bifurcation of the carotid and occluded it. In Smyth's case, which was successful after ligature of the vertebral, he tied the carotid at the time of ligaturing the carotid, but that did not save him from fearful hemorrhage. It was only when the vertebral was secured on the fifty-fourth day that I relieved my patient from the risk of death. I believe that a return circulation had been set up through the vertebral, and that, as it was likely a clot had not formed in the first stage of the subclavian in consequence, the securing of this vessel would prevent further hemorrhage. The other vessels in the first stage, however, remained unsecured, and the flow of blood through them remained. Whether the ligature of the solitary vessel had the desired effect, or whether it was simply a case of *post hoc ergo propter hoc*, it is impossible to say. The proposal to examine the parts was made by me at the time of consultation, allowing some interval after the bleeding to elapse; but the opinion was against me, and I did not feel justified in taking the responsibility of acting. It could not have been done without putting the patient under ether, and there was danger that his struggles would have brought on fatal hemorrhage. As the *post-mortem* examination showed, no further operation would have been successful."—*Brit. Med. Journ.*, Oct. 14, 1882.

Syme's Amputation.

Every one knows that Mr. Syme attached very great importance to certain details of the admirable operation of amputation at the ankle-joint that goes by his name. He insisted especially upon the position of the incision across the sole. "The foot being placed at a right angle to the leg, a line drawn from the centre of one malleolus to that of the other, directly across the sole of the foot, will show the proper extent of the posterior flap. The knife should be entered close up to the fibular malleolus, and carried to a point on the same level of the opposite side, which will be a little below the tibial malleolus." Thus he laid it down, and he dissected the flap off the os calcis from below upward. These directions were for a long while rigidly observed, but of late years surgeons have been less particular in the direction of the incisions. That across the sole is often made obliquely backward, at the expense of the flap. The incision across the front of the joint is also varied, sometimes being quite transverse, at others curved towards the toes. With regard to the heel, of course the more obliquely backward the incision of the sole is made the less difficulty will there be in the reflection of the flap, if done from below upward; but it seems of importance to preserve at least the whole of the heel, so that it is best to make the incision a vertical one. The thick integument of this region forms so capital a pad on the extremity of the stump that care should be taken to secure the whole of this, and to bring it well forward in the first instance, for during repair and afterward there is a tendency in this to be drawn backward. Of course it will not be forgotten that after this operation the person stands and walks directly upon the extremity of the stump. With regard to the particular points where the extremities of the vertical incision should be, some surgeons keep them both on a level with the external malleolus, but Mr. Wm. S. Savory prefers to have them rather more forward—that is to say, on a line with the extremity of the internal malleolus, but not extending higher than the level of the external one, for the base of the flap is thereby so much broader. This is, he thinks an advantage, and there is no objection to it. But of all changes in the operation he should attach most importance to the way in which the dissection is done. He greatly prefers, after making both incisions, to open the joint from the front, and then to work from above downward. This mode of dissecting out the os calcis is far easier than the original plan of dissecting from below upward, and there is less danger of inadvertently cutting into the substance of the flap. He has adopted this plan now for several years in many cases, and he cannot doubt that it is a much better one of performing the operation. By dissecting out the os calcis from above downward, and so escaping the only difficulty in the operation—that of turning off the heel—there is no temptation, as in the other way, by carrying the first incision obliquely backward, to sacrifice some portion of the flap.—*Lancet*, Feb. 3, 1883.

Resection of Several Ribs in Empyema.

Dr. BRUGLOCHER (*Aerztl. Intell.*, No. 31, 1882) contributes a paper on this subject, advocating the practice of resection of several ribs in cases of long-standing empyema in adult patients. He regards the excision of a small piece of rib, as accessory to the ordinary method of opening the pleural cavity, as accepted by the profession at the present time; the proceeding being a matter of indifference to the patient, but of decided value in its results. The ultimate results of operation for relief of empyema are found to be uniformly more satisfactory in children than in adults. The explanation of this fact he finds in the greater elasticity of the chest-walls, which adapt themselves to the diminished size of the compressed lung, and thus assist in lessening the size of the pleural cavity. This retraction of the chest-walls can only take place to a very limited extent in the more rigid adult thorax, and hence the recovery is prevented by a purely mechanical agency, which admits of removal by mechanical means. Resection of ribs has generally been undertaken only as a means of facilitating the continued escape of pus from a suppurating pleura; here, however, one has to do with a plastic operation, the result of which depends, amongst other things, upon the mechanical exactness with which it is carried out. Several authors have practised and recommended this method, which was first suggested by Simon. As the result of an investigation into the work of several authors, Dr. Homen, of Helsingfors, lays down the rule that, in cases where two to three months have passed between the commencement of the disease and the formation of a fistula, and where recovery has not taken place in from four to five months afterwards, no hope can be entertained of recovery by ordinary means. The details of a case are related in which a simple serous pleurisy in a man, aged 45, was treated at first by puncture, with apparent success. Six months later, a painless swelling became developed in the right side in the axillary line, dulness and absence of respiratory sounds being noted, extending as far upwards as the middle of the shoulder-blade. Its contents being found to be purulent, the tumour was incised, three months after its first appearance, and a portion of the eighth rib, about one inch, removed. The whole operation and subsequent treatment of the wound were carried out strictly antiseptically, and the discharge from the opening was but very slight, but recovery did not take place. Ten weeks after the operation it was found that a cavity still remained, allowing a probe to pass three inches from without inwards, and four and a quarter inches upwards. Free resection of the fourth, fifth, sixth, seventh, and eighth ribs was then performed, three and three-quarter inches being removed from the lowest, and one and three-quarter inches from the highest of these, and from the intermediate ribs gradually increasing lengths. The pleura was not opened in any fresh place. By various methods of calculation, Dr. Bruglocher arrives at the conclusion that the length of rib to be removed must about correspond with the distance between the pulmonary and parietal pleura, and the resection must be carried upwards in gradually decreasing extent to the point where the two surfaces of pleura are again in contact. The results obtained in this case were satisfactory; the falling-in of the chest-wall was ultimately followed by complete healing of the sinus.—*London Med. Record*, Dec. 15, 1882.

Resection of the Ankle.

Prof. **Busch**, of Berlin, describes in the *Centralblatt für Chirurgie*, No. 41, 1882, a new method of resecting or simply of exposing and clearing out the ankle, in cases of fungous inflammation of this joint. The ordinary operation by two lateral incisions does not, it is held, expose the interior of the joint to such an extent as to enable the surgeon to determine the amount of disease. Hueter, who recognized this difficulty, exposed the joint by forming a flap on its anterior surface. This proceeding has not been received with much favour, as it necessitates division, not only of several important tendons, but likewise of vessels and nerves. If the flap be formed from the posterior surface of the joint, the tendo Achillis must be divided, and the strength of this structure, even though it be united again by sutures, will necessarily be much impaired. On September 5, the following operation was performed by Dr. V. Hösslin, under the direction of Prof. Busch. An incision was carried from malleolus to malleolus across the sole of the foot, inclining backwards towards the greater tuberosity of the os calcis. The soft parts of the sole were divided down to the bone. The tendinous and other soft structures behind the bones on each side of the joint were then carefully detached and drawn forwards, so that the lateral aspects of the joint were freely exposed. The os calcis was then sawn through in the direction of the external wound, from the anterior margin of the greater tuberosity, obliquely upwards towards the anterior margin of its articular surface with the astragalus. The posterior fragment having been elevated, the posterior ligamentous structures of the ankle were cut through, and the exterior of the joint freely exposed. In this case, as there was extensive disease of bone and synovial membrane, with much ulceration of cartilage, it was thought necessary, in addition to cutting away the fungous growths within the joint, to extirpate the astragalus, and to remove the softened and diseased portions of the bone at the extremities of the tibia and fibula, and on the upper surface of the os calcis. The interior of the wound having been disinfected, the posterior fragment of the os calcis was replaced and fixed by two wire sutures. The wound was drained and dressed antiseptically. Prof. Busch anticipates that if the patient—a young woman aged eighteen—remain free from tuberculosis, a movable and useful joint will be formed in this case between the bones of the leg and the upper surface of the os calcis, the limb of course being slightly shortened in consequence of the removal of the astragalus. There is no reason, it is thought, to doubt the future union of the fragment of os calcis; and the cicatrix across the sole, as it is situated in front of the greater tuberosity, is not likely to cause any trouble.—*London Medical Record*, Jan. 15, 1883.

OPHTHALMOLOGY AND OTOLOGY.

New Method for Dilating the Lachrymal Passages.

Dr. **Galezowski** (*Recueil d'Ophthalmol.*, Aug. 1882) has for the last six or seven months been using forcible rapid dilatation of the nasal duct, without incision, for the cure of stricture. He has found that by the use of his dilator he can effect the cure of even long-standing strictures in a month or six weeks; and quotes cases in which after Stilling's method, followed by the use of Cooper's probes, had failed, his dilator was successful. His method is as follows: Having divided the canaliculus, as in Stilling's operation, he introduces his dilator, and